Abstract Submitted
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Trends in behavior for tunable ferroelectric material DANIEL POTREPKA, US Army Research Laboratory — Measurements in an environmental chamber pose problems in effectively coupling to rf- and microwave-tunable, ferroelectric devices. Capacitance can be measured but true device loss is shrouded by losses due to calibration error, impedance matching error from cables and packaging, and vibration interference. In this study, the true device losses of pulsed-laser deposited Barium Strontium Titanate films, at rf frequencies under DC bias are sought using a probe station, calibrated for matching. Breakdown of the device at the higher end of applied voltage and thin film material structure are characterized. Resulting losses and tunability versus temperature are commented upon.

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